

Docket No. 520,411,22X00
Serial No. 10/058,781
Office Action dated April 12, 2006

REMARKS

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I. Introduction

By the present Amendment, claims 5, 6, 15, and 17 have been amended. Claims 1 – 4, 16, and 21 have been canceled. Accordingly, claims 5, 6, and 11 – 17, remain pending in the application. Claims 5, 6, 11, and 15 are independent.

II. Office Action Summary

In the Office Action of April 12, 2006, claims 2, 15, and 16 were objected to because of various informalities. Claims 1 and 21 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,704,508 issued to Asahi. Claims 1 – 4 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,549,692 issued to Harel, et al. ("Harel"). Claims 15 – 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,591,029 issued to Lin, et al. ("Lin"). These rejections are respectfully traversed.

III. Allowable Subject Matter

The Examiner's indication that claims 11 – 14 are allowed, and that claims 5 and 6 would be allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claims, is noted with appreciation.

IV. Claim Objections

Claims 2, 15, and 16 were objected to because of various informalities. Regarding these objections, the Office Action cites several instances of language that was considered to be improper and/or indefinite.

The cancellation of claims 2 and 16 has rendered part of these objections moot. Regarding claim 15, Applicants have made amendments, in part, to address

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the objections raised in the Office Action. For example, the language at line 2, has been revised to remedy the cited indefiniteness.

Withdrawal of this objection is therefore respectfully requested.

V. Rejections under 35 U.S.C. § 102

Claims 1 and 21 were rejected under 35 U.S.C. § 102(e) as being anticipated by Asahi.

The cancellation of claims 1 and 21 has rendered this particular ground of rejection moot.

Claims 1 – 4 were rejected under 35 U.S.C. § 102(e) as being anticipated by Harel.

The cancellation of claims 1 – 4 has rendered this particular ground of rejection moot.

VI. Rejections under 35 U.S.C. § 103(a)

Claims 15 – 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Lin. Regarding this rejections, the Office Action alleges that Lin discloses most of the steps recited in claim 15, including providing a setting for switching optical switches, and after selecting an optical reflection monitor circuit by a CPU, performing A/D conversion of a monitored signal from the optical reflection monitor circuit and transferring the converted monitored signal to a monitoring and control unit. The Office Action admits that Lin fails to expressly disclose the step of setting a switching information register, as well as the step of setting an optical reflection monitoring register. The Office Action indicates, however, that these features are conventional and well known in the art. Accordingly, a skilled artisan

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would have been motivated to incorporate these features in the teachings of Lin in order to arrive at the claimed invention.

As amended, independent claim 15 defines a method of collecting optical reflection alarm information in an optical switching system. The method is applied to an optical switching system that includes a system control unit and a plurality of optical switch boards. Each of the optical switch boards includes a board control unit and a plurality of optical reflection monitors that are coupled to I/O ports of an optical switching unit. The method comprises the steps of:

- performing a settings for optical path switching in each of said optical switching units and storing information indicative of optical interconnection relationships between the I/O ports into a switching information register by each of said switching board control units in accordance with instructions from said system control unit;

- selecting one of said optical reflection monitors one after another by each of said board control units;

- determining status of an optical signal path passing through an I/O port coupled to said selected optical reflection monitor by comparing a monitored signal received from the selected optical reflection monitor with a predetermined threshold by said board control unit;

- setting status information indicative of the status of said optical signal path into an optical reflection monitoring register by said board control unit; and

- collecting said status information from each of optical switch boards by said system control unit.

According to independent claim 15, settings for the optical path switching in each of the optical switching units are set and information indicative of optical interconnection relationships between the I/O ports are stored into a switching information register by each of the board control units in accordance with instructions from the system control unit. The optical reflection monitors are

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selected one at a time by each of the board control units. The status of an optical signal path passing through an I/O port coupled to the selected optical reflection monitor is determined by comparing a monitored signal received from the selected optical reflection monitor with a predetermined threshold by the board. Status information indicative of the status of the optical signal path is set into an optical reflection monitoring register by the board control unit. Next, status information from each of the optical switch boards is collected by the system control unit. As discussed in the Specification, the operation control unit collects circuit board status information from the plurality of switch boards. Various other information is collected from the I/O unit and relayed to each of the circuit boards. See Fig. 3 and corresponding text.

The Office Action had previously alleged that Lin disclosed most of the features recited in independent claim 15. As amended, however, independent claim 15 recites features that are not disclosed, or in anyway suggested, by Lin. Specifically, Applicants review of Lin has failed to provide any disclosure or suggestion for a method wherein status information from each optical switch board is collected by the system control unit. In fact, Lin does not appear disclose a structure wherein the control unit would even be capable of collecting optical reflection alarm information from each of the optical switch boards. Lin simply fails to provide any disclosure or suggestion for features recited in independent claim 15 such as, for example:

determining status of an optical signal path passing through an I/O port coupled to said selected optical reflection monitor by comparing a monitored signal received from the selected optical reflection monitor with a predetermined threshold by said board control unit;

setting status information indicative of the status of

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said optical signal path into an optical reflection monitoring register by said board control unit; and

collecting said status information from each of optical switch boards by said system control unit.

It is therefore respectfully submitted that independent claim 15 is allowable over the art of record.

Claim 17 depends from independent 15, and is therefore believed allowable for at least the reasons set forth above with respect to independent claim 15. In addition, this claim introduces novel elements that independently render it patentable over the art of record.

VII. Conclusion

For the reasons stated above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a Notice of Allowance is believed in order, and courteously solicited.


If the Examiner believes that there are any matters which can be resolved by way of either a personal or telephone interview, the Examiner is invited to contact Applicants' undersigned attorney at the number indicated below.

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AUTHORIZATION

Applicants request any shortage or excess in fees in connection with the filing of this paper, including extension of time fees, and for which no other form of payment is offered, be charged or credited to Deposit Account No. 01-2135 (Case: 520.41122X00).

Respectfully submitted,
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